

all patients and no one had to be withdrawn from the study because of side effects.

The observed response rate in this series is comparable with previous studies, which have documented response rates in 42–73% of patients with cryoglobulinaemia treated with IFN- α and a disappointingly low long term response in 0–22% of patients.^{4–7} It is difficult to compare and reach a general conclusion from this group of studies as the clinical and immunological parameters of response are not comparable between the groups. Moreover, the treatment regimen, including dose, frequency and duration of therapy, differed in all the studies. However, some important clinical issues have been tackled by other authors. Many studies had a 10–14% dropout rate because of intolerable side effects, with one study noting a deterioration in renal and neurological symptoms while on treatment, whereas other patients required a reduction in dose. These problems were not encountered by Cresta and colleagues, perhaps because of the lower dose of IFN- α used. Other comparable observations were the association of genotype 2 with response to treatment, the poor response of neurological symptoms in general and the tendency (though not significant) for symptomatic patients to respond less well than asymptomatic ones. Although not a universal finding, immunological responses tend to mirror viral responses, implying that the success of IFN- α relies on its anti-viral action rather than effects on immune function.

Marginal improvements in the long term responses have been achieved with higher doses of IFN- α and a longer duration of treatment, as observed by Casato and colleagues⁶ and Adinolfi and coworkers⁷ who treated their patients for 12 months, obtaining long term response rates of 16 and 22%, respectively. It is likely that the addition of ribavirin to IFN- α will improve the virological response further, as already documented in patients with HCV associated liver disease.^{8–9} A proportion of patients in previous studies has responded when treated with IFN- α monotherapy for a second time; this group may now be more suitably treated with combination therapy with which long term response rates of 49% have been achieved in relapsers receiving combination therapy as opposed to only 5% with monotherapy.¹⁰

Although IFN therapy is still the most extensively used antiviral agent for chronic HCV infection, it is far from ideal and the search continues for more effective antiviral agents and combination treatment.

In the meantime, what lessons can be learnt from this and similar studies? Firstly, that the presence or absence of circulating cryoglobulins cannot be used to identify patients with more severe liver disease nor to identify those more likely to respond to IFN- α . Secondly, that patients with cryoglobulinaemia and associated symptoms could be considered for treatment irrespective of the severity of liver disease as there is a reasonable expectation of symptomatic relief following a virological response. Resolution of the less common but more severe complications (nephrological and neurological) is less likely however. Thirdly, should we continue to look for cryoglobulinaemia? Probably not, except where symptoms or biochemical findings suggest they are clinically relevant as in most instances cryoglobulinaemia is of little clinical importance. Finally, what do we know of the mechanisms that underlie the formation of cryoglobulins and their association with HCV rather than—for example, hepatitis B virus infection? So far, very little.

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ERCP training: for the few, not for all

Endoscopic retrograde cholangiopancreatography (ERCP) is an advanced endoscopic procedure that requires considerable training and experience to perform effectively and safely.¹ It is the most dangerous procedure regularly performed by gastrointestinal endoscopists, with morbidity and mortality of 5–10% and 0.1–1%, respectively.² In the United States, recommendations for ERCP training have evolved from ridiculously low “guesstimates” of procedure numbers required for competence³ (e.g. 25, 50) to the current consensus—based on a large prospective study⁴—that at least 180–200 diagnostic and therapeutic procedures are needed. ERCP is an integral part of the management of

hepatobiliary and pancreatic (HBP) disorders, but it is only a part. Trainee gastroenterologists wishing to become experts in dealing with these disorders need to learn many clinical as well as procedural skills; it is useful to think of this as HBP training. The would be HBP specialist must work as part of a multidisciplinary team, and learn a great deal about body imaging (e.g. ultrasound, computed tomography, magnetic resonance), interventional radiology, gastrointestinal pathology and cytology, hepatology, oncology, surgery, and nutrition. Although perhaps only half of the cases seen in a specialist unit require ERCP, those intending to perform this procedure should be fully trained. There is no place for the purely “diagnostic” ERCP endoscopist: all endoscopists who perform ERCP must be able to decompress an obstructed biliary tree by sphincterotomy, stenting or nasobiliary drainage.⁵ The trained ERCP endoscopist's success rate for cannulating the duct of choice (common bile duct or pancreatic duct)

should exceed 80%⁶ (90–95% in a specialist unit). Under-trained endoscopists with success rates for ERCP in the 25–50% range abound, especially in the United States. Many are self-taught or have very limited training based on weekend courses using static or animal models.⁷ They often fail to cannulate, or perform incomplete studies, leaving obstructed biliary or pancreatic ducts undrained. Their complication rates are high as a result of repeated instrumentation of the duodenal papilla and inept use of standard and needle-knife papillotomy.⁸ Their lack of experience of interpreting ERCP radiology not infrequently results in missed or erroneous diagnoses, and inappropriate use of therapeutic ERCP techniques. There are many reasons to insist on standardised ERCP training for HBP specialists: it ensures the best care for patients, minimises risk and maximises benefit and protects physicians and their employers from litigation.

Who performs the ERCP (gastroenterologists, surgeons, radiologists) is less important than the quality of their training. In this issue, Wicks *et al* (see page 154) recommend the development of structured ERCP training and assessment in the United Kingdom to meet the demands of the Calman (and soon to be post-Calman) era. As experienced teachers, they recognise that not all gastro-intestinal trainees can or should receive ERCP training. They also appreciate the need for ERCP to be learned in an environment where all the necessary clinical, procedural and interdisciplinary resources are readily available. To be able to perform diagnostic and therapeutic ERCP with an understanding of their risks and benefits, longitudinal experience of caring for inpatients and outpatients with HBP disorders is essential. Novices who focus on acquiring the technical skills of ERCP and neglect to study the disease processes they are used to investigate and treat are a menace to their patients.

As HBP and ERCP training are inexorably linked, let us assume that HBP training includes structured experience of diagnostic and therapeutic ERCP. If we accept that HBP training has to be rationed to maximise the experience of individual trainees, then a selection process is needed. How do we choose who gets HBP training? Solid clinical and endoscopic skills are essential, as well as a clear interest in HBP disorders and their management. How can we ensure that the selection process is fair? Will trainees in Aberdeen and Aberystwyth have the same opportunities as those in London, Leeds and Liverpool? It is important to avoid a glut of would be HBP specialists, otherwise too many endoscopists will be performing too few ERCPs to maintain proficiency. HBP training should not be the reward for furious lobbying, nor for being the professor's anointed. The fairest way to choose HBP trainees would be to establish nationally agreed criteria and have the selection process overseen by one or more professional bodies or societies. The fact that physicians from a variety of disciplines perform ERCP in Britain complicates the oversight issue. Inevitably, local factors will continue to dictate how candidates are chosen for training. Selection for HBP training should not be a guarantee of accreditation in that subspecialty at the end of a predetermined period. Unfortunately, some trainees lack the necessary hand-eye coordination or cognitive skills to perform ERCP; in my experience, this is usually irremediable, regardless of how many procedures are performed. These individuals should be identified quickly and advised appropriately; it is no

kindness to let them struggle on. They should be told gently but firmly that their future is not in managing HBP disorders and offered assistance to change their trajectory towards another, less endoscopically oriented area of gastroenterology. In this litigious age, the events leading to such action must be meticulously documented, to avoid possible law suits alleging prejudice or victimisation. Every trainee should keep a record of their procedures. With the availability of computerised systems for endoscopy report generation and data storage, any unit large enough to offer HBP training should be able to provide its trainees with printed reports to file in loose leaf folders. To ensure that trainees do not exaggerate their ERCP numbers, each report should be cosigned by a trainer who can attest to the trainee's active involvement. For an ERCP to count towards training, it is essential that the trainee spend time as the sole manipulator of the instrument. Just being in the room when the ERCP is performed—namely observational experience—does not constitute training. When job applicants claim to have done a surprisingly large number of ERCPs during training, this information is best viewed with a jaundiced eye. Training numbers must be verifiable, and this should be made the responsibility of the trainer. At the end of the training period, the trainer should produce a written report detailing the trainee's experience, including specific numbers of procedures. This could be done using a standard form that would be submitted when trainees apply for senior registrar or consultant posts. Endoscopic training directors in the United States routinely issue such reports at the request of hospital authorities.

Should ERCP be performed only in specialist centres? HBP training should be conducted in specialist units with the required volume of patients and procedures and all the necessary support services. The teaching centres should teach and provide specialist services not readily available in the community, but to have them monopolise ERCP would deny many well-trained gastroenterologists, surgeons and radiologists the opportunity to apply their hard-won skills. An appropriately trained ERCP endoscopist in the community can do much useful work, and manage HBP emergencies, such as acute cholangitis, with the necessary equipment, technical support and referral centre back up. The inglorious days of "see one, do one, teach one" in gastrointestinal endoscopy are (thankfully) long gone. We should choose a few good men and women every year and train them really well to manage HBP disorders. Not everyone will agree, but this is surely the future of ERCP training.

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